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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,260

03/28/2006

William Woulds

9740

181 7590 09/11/2009
MILES & STOCKBRIDGE PC
1751 PINNACLE DRIVE
SUITE 500
MCLEAN, VA 22102-3833

EXAMINER

TOLAN, EDWARD THOMAS

ART UNIT

PAPER NUMBER

3725

NOTIFICATION DATE

DELIVERY MODE

09/11/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/574,260

Applicant(s)

WOULDS, WILLIAM

Examiner

EDWARD TOLAN

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE, 6-29-2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4,8-11,13-16,19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue (6,598,451) in view of Shah et al. (3,577,753). Blue discloses an apparatus (2) for producing a metal container comprising at least one ironing die (4) having an insert (16) to iron a container wall and a least one die case (17) adjacent to the ironing die and having an internal cooling cavity (44) for circulating coolant with the die case and to the insert. Figure 1 shows that die cases (15,17) open into a bore of the apparatus directly underneath the redrawing die (14) and ironing die (16) respectively. It appears from figure 1 that the die cases have inclined faces. Regarding claims 13-16,19 and 20, Blue discloses radially innermost annular channel (44) formed as an imperforate annular wall around one quarter of the circumference of the die case (17). The channel is at an angle to radial die case inlets (52,54,56,58). Blue does not disclose that the coolant is only supplied to the die case. Shah teaches (column 2, lines 22-32) that it is known to supply coolant between a die case (22,18) and dies (16,17) so as to provide coolant at a position adjacent the die (16,17) to circulate the coolant around the die. The coolant does not enter into bores in the die. Shah teaches (column 2, lines 45-75) a punch body (29) that has an inlet bore (36), an outlet bore (39) and a

restrictor means (column 4, lines 10,11) for flow control. The punch body includes a ram (32) having connecting means (31) for connecting the punch body to a punch adapter (28) and a coolant distribution plug (37). The punch body includes concentric bores (36,39,40). Shah teaches air jets (26, column 4, lines 1-7) in bottom die case (18). It would have been obvious to one skilled in the art at the time of invention to only provide the cooling to a position adjacent the die insert as taught by Shah in the invention of Blue in order to prevent cracking of the die insert and to improve wear resistance of the insert. It would have been obvious to one skilled in the art at the time of invention to provide Blue with a cooled punch as taught by Shah in order to prevent a buildup of heat in the punch. Shah teaches that providing cooling to a position adjacent a die insert and to a position adjacent a punch surface provides adequate cooling for the ironing process without providing coolant into an ironing bore.

Claims 3,12,17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue in view of Shah and further in view of Scholey (6,776,021). Blue in view of Shah does not disclose a vacuum port for removal of debris. Scholey teaches that it is known to remove debris via a vacuum port (44). It would have been obvious to one skilled in the art at the time of invention to provide Blue in view of Shah with a debris collection port as taught by Scholey in order to continuously clear debris through the coolant system.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blue in view of Shah and further in view of Main (4,223,544). Blue in view of Shah does not explicitly disclose an inclined cooling face. Main teaches that lubrication/cooling die

(42) has an inclined face (54) towards an adjacent die insert (34). Main teaches debris washing by jet nozzles (col. 3, lines 5-10 and 55-60). It would have been obvious to one skilled in the art at the time of invention to incline the cooling face of Blue in view of Shah toward the die insert as taught by Main in order to provide a lead-in to the ironing die.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blue in view of Shah and further in view of Cheers (5,692,409). Blue in view of Shah does not disclose biasing means for biasing a cooling face. Cheers teaches a system (15,16,17) for biasing a cooling face against an ironing die comprising pistons (15) resiliently mounted on the dies, the pistons being activated by fluid pressure (column 4, lines 34-40). It would have been obvious to one skilled in the art at the time of invention to provide Blue in view of Shah with biasing means as taught by Cheers in order to keep the die case biased against the die insert.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. The reference to Shah provides a teaching of only supplying coolant to positions adjacent to die and punch surfaces so that the coolant is circulated internally. The skilled artisan would have been motivated to only cool adjacent to forming surfaces so that that extra machining of the die and punch forming surfaces is not required so that wear resistance of the forming surfaces is improved.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525. FAX communications should be sent to 571-273-8300.

/Edward Tolan/

Primary Examiner, Art Unit 3725